

Title (en)
EROSION RESISTANT FLUID PASSAGEWAYS AND FLOW TUBES FOR EARTH-BORING TOOLS, METHODS OF FORMING THE SAME AND EARTH-BORING TOOLS INCLUDING THE SAME

Title (de)
EROSIONSFESTE FLUIDKANÄLE UND STRÖMUNGSRÖHRE FÜR ERDBOHRWERKZEUGE, VERFAHREN ZU IHRER HERSTELLUNG UND ERDBOHRWERKZEUGE DAMIT

Title (fr)
VOIES DE PASSAGE DE FLUIDE RÉSISTANTES À L'ÉROSION ET TUBES D'ÉCOULEMENT POUR OUTILS DE FORAGE, LEURS PROCÉDÉS DE FORMATION ET OUTILS DE FORAGE LES COMPRENANT

Publication
EP 2231993 A2 20100929 (EN)

Application
EP 08863049 A 20081211

Priority
• US 2008086394 W 20081211
• US 95720707 A 20071214

Abstract (en)
[origin: US2009152013A1] Flow tubes for earth-boring tools include hardfacing material for protecting the tubes from erosion due to the flow of fluid through a fluid passageway extending therethrough. Earth-boring tools include an erosion-resistant material covering a surface of a body of the tools for protecting the bodies from erosion due to the flow of fluid through a fluid passageway extending therethrough. Methods of forming earth-boring tools include forming a body having a fluid passageway extending therethrough and covering a surface of the body with a hardfacing material. The surface of the body may be located in a region susceptible to erosion when fluid is caused to flow through the fluid passageway.

IPC 8 full level
E21B 10/08 (2006.01); **E21B 10/18** (2006.01); **E21B 10/24** (2006.01); **E21B 10/61** (2006.01)

CPC (source: EP US)
B23K 9/048 (2013.01 - EP US); **B23K 10/027** (2013.01 - EP US); **E21B 10/18** (2013.01 - EP US); **E21B 10/61** (2013.01 - EP US); **B23K 2101/20** (2018.07 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA MK RS

DOCDB simple family (publication)
US 2009152013 A1 20090618; US 7828089 B2 20101109; CA 2708810 A1 20090625; CA 2708810 C 20130319; EP 2231993 A2 20100929; EP 2231993 A4 20130703; SA 108290785 B1 20120212; WO 2009079331 A2 20090625; WO 2009079331 A3 20090917; WO 2009079331 A4 20091105

DOCDB simple family (application)
US 95720707 A 20071214; CA 2708810 A 20081211; EP 08863049 A 20081211; SA 108290785 A 20081214; US 2008086394 W 20081211